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ABSTRACT

Based on an exemplary case study, this booklet illustrates a program for improving environmental quality. Designed for teacher use, it explains how to start a program for learning about environmental quality, as well as action to take regarding environmental improvement. The approach is interdisciplinary, stressing skills involving questioning, gathering and evaluating data, meeting and interviewing people, translating information into statistics, and making presentations. It is an attempt to lead students from research and discussion to constructive action associated with environmental issues. (BL)

NATIONAL WILDLIFE FEDERATION

TO SAVE THE EARTH

A TOOL KIT TO OUR ENVIRONMENTAL QUALITY INDEX

BY FRANKLIN GROSS AND DENNIS CORSO TEN CENTS

ED 068337

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PROGRAMS

A Beginning Note

"EQ" stands for "Environmental Quality." You can learn how to measure it in your own hometown. You can share your findings with the whole community. You can build a community team and do something to save the environment. Or you can stand by and watch while our wildlife dies, our green forests are paved in concrete, our air becomes unfit to breathe, our water becomes unfit to drink, and the last proud eagle disappears from the skies of America.

TO SAVE THE EARTH is a Tool Kit designed to show you how to get started — to show you, step by step, how a single class and teacher can not only learn *about the quality of the environment, but can* act, *and act effectively, to save what is best in America.*

Improving our Environmental Quality should be the concern of every responsible teacher, because it includes all other vital priorities of our nation. This is a program to start people working for a better EQ. It is not an "educational gimmick," — it is fundamental education in action, combining environmental study with the basic learning skills: learning how to ask questions, gather and evaluate data, meet and interview people, translate information into meaningful statistics, make well-organized presentations, and move from research and discussion to constructive action.

This EQ program encompasses history, economics, biology, speech, mathematics, civics, aesthetics, chemistry — the whole gamut of curriculum.

More important, such a program can bridge the people gap; can show the old and the young, the city dweller and the suburbanite, the "liberal" and the "conservative" that we have a cause that binds us all together — TO SAVE THE EARTH. We can teach people how to persuade instead of confront, how to reason instead of heckle, how to call for facts instead of calling names.

This Tool Kit also tells what is being done in one small American city, by students of two high schools in Connecticut. Working together, without fanfare and without any major financial support, they are developing a program to measure the quality of the environment in Enfield, Connecticut — not just this year, but every year. And as they measure the quality of the environment, they are sharing their findings with the entire community, building a broad base of grass-roots support for a continuing program to save the environment.

What is happening in Enfield can happen in your town. But the plan must suit the special needs of your community. Use the ideas in this Tool Kit with flexibility and imagination — adapting them to a program that makes sense for your town or city. And, may the work begin, this very day in your own classroom. Good luck!

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Dennis Corso

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DIG....DISCUSS....DO!

To begin, we're going to show you a brief summary of all the steps you might take to get a Dig-Discuss-Do program rolling. Later on, we'll explain in detail how to implement each step. We presume that this Tool Kit is being read and shared by both students and teachers in a genuine partnership. Remember, you should *use these steps merely as starting points* — modifying and adapting them to fit your own community.

An Overview of the Program

Step 1. Assess the problems of Environmental Quality in the nation. (The National EQ Index is a natural here.)

Step 2. Discuss the problems of your own community, and the possibility of a Dig-Discuss-Do program to deal with the Environmental Quality of your own town.

Step 3. Organize a starting team of students — and other teachers if possible — to think through the possibilities of such a program. You don't need a lot of people — just a few who really care. Don't forget to let other classes know what you are doing. You may find some eager volunteers.

Step 4. Let the team join you in approaching the school administration so they understand and are prepared to support the program. Principals *do* support programs that are carefully thought out, and make sound educational sense.

Step 5. Train your team not only in the basic realities of Environmental issues, but also in the skills they will need to gather information and evaluate environmental quality on their own.

Step 6. Develop continuing individualized study programs so each student can move ahead at his own pace in learning about the environment, even as he keeps pace with the group.

Step 7. The teams draw up lists of people and groups to see, and places to go observe and evaluate the Quality of the local environment.

Step 8. Student teams are set up to cover each phase of the study — Water, Soil, etc.—and students select the team most interesting and challenging to them.

Step 9. Your teams go into the field to *DIG* for the facts, revising their approach and deepening and expanding the scope of their research as they develop "know-how" from firsthand experience.

Step 10. *"DISCUSSION"* phase begins, as the teams come back to class and share what they have learned with their fellow students. This is the point where individualized study should spurt, as students become personally involved and want to fill gaps in their own knowledge. Hallelujah! — SELF-MOTIVATED homework!

Step 11. Students can develop creative and exciting ways to share their findings with the entire community, publishing and distributing the first "Hometown Environmental Quality Index," perhaps producing color-sound slide units that dramatically show people what the local EQ really looks like.

Step 12. Your original team seeks ways to involve the total community in a program to *DO* things to solve the problems. You seek ways to inte-

grate the local program with sound state and national programs, working with local newspapers, radio and TV to inform and involve the community.

Step 13. Together, you explore ways to get a sustained action program, finding how to persuade, get laws enacted, get existing laws enforced, always seeking ways that work constructively to solve problems without creating new ones.

Step 14. You can begin work on EQ for the following year, repeating the cycle with a vital new ingredient — *your EQ Index can now show the town where you are gaining and where you are losing ground.* You have moved into a continuing program with the school as its creative heart.

Now, let's talk about each of these steps in detail.

Step 1: Uncovering The Problems of the Nation

Just gathering the facts isn't enough. We have found that the real first step isn't helping kids *know*, it's learning to *care*. Environmental concern is hard to teach because it demands a whole new philosophy of life — making sacrifices, and giving up things we are not prepared to give up.

"Earth Day" programs may be spectacular, but such one-day activities often produce community smugness and a false sense of accomplishment that retards real progress. Likewise, witch-hunting and name-calling do not solve the problem. We are all involved in the over-consumption and the waste that produces pollution.

While identifying *problems*, help students identify the *causes* of those problems. The cartoon character, Pogo, said it, "we have met the enemy, and he is us." In the shock of self-discovery, real learning can begin.

The National EQ Index is a logical starting point. In organizing students for digging at the facts, you might follow its breakdown of environmental components:

1. Air
2. Water
3. Wildlife
4. Timber
5. Soil
6. Minerals
7. Living Space
8. Population

The Enfield students are adding some categories based on student concerns and community interests. For example, they have teams dealing with the quality of recreational facilities, highways and mass transportation, and the special issues relating to the Connecticut River.

As you begin, bear in mind that *the answers needed to save a threatened environment won't come until we all learn how to ask the right questions.* Because the problems of a threatened environment vary greatly from community to community, and change rapidly, *meaningful education in environmental studies means turning students into self-motivated seekers who will keep on framing questions and finding answers their whole lives long.*

Your environmental study program must move along under its own momentum. *It must emerge from the students themselves* — the issues are too vast, the job too big, to expect teachers to provide the motivation and run the show. If the motivation to solve environmental problems comes from the top down — from the teacher, it will not last. It must be a continuing concern of the kids themselves — and this will emerge

only if you work with them in a truly creative partnership.

But teachers need some sort of tangible approach to this whole vast and complex field. And in this case, the students, too, need some way of getting their material organized into something manageable. Here's one approach that works.

The Lab Cart. A "Lab Cart" costs less than $15 to make — and it may spark your whole program. Developed by students in Enfield, the Lab Cart concept will not only get your *materials* organized for effective learning but will also provide *methods* for effective learning — methods that teach students how to frame questions and get the answers.

Basically, a Lab Cart is a simple wooden cabinet on wheels, made by the students themselves. We make them about 36" high, 36" wide, and 12" deep, out of standard shelving boards with a homosote back that doubles as a bulletin board.

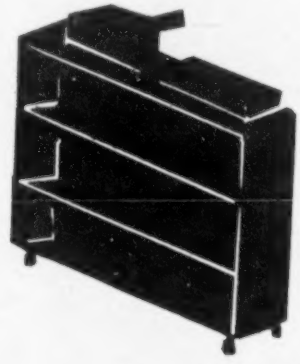
Once the cart has been made, students begin to assemble multi-media materials on Environmental Studies. One student may make contact with National Wildlife Federation, gather an assortment of its educational materials, and make herself a "specialist" on using National Wildlife materials effectively. Others may do the same with Audubon Society, Sierra Club, state agencies involved in conservation.

Another student with a particular interest in film might gather catalogues and become expert in knowing what films and filmstrips are available to teach about pollution and conservation. Another might work with local libraries in compiling a Lab Cart listing of ecology materials available in the town library.

Gradually, the shelves of the Lab Cart fill with interesting and challenging source material, paperbacks, a classroom set of the annual EQ Index, filmstrips, and a scrapbook of what's been happening on the local scene in terms of anti-pollution projects. Because the cart is mounted on casters, it can move easily from room to room, permitting its use by many teachers in all sorts of classes, even in other schools in town.

But having all the *materials* together is just the beginning of the Lab Cart idea. On top of the cart you can mount a slide projector and a tape recorder. *Students create sound-slide reports on the local environment that show how to use the materials in the cart effectively.* Thus, the cart is a source both of *materials and methods for effective study, materials and methods developed by the students themselves.* And there is no better way to learn something than figuring out how to teach it to others.

One Lab Cart frequently inspires another. The "parent" Lab Cart can be an overview of Environmental Studies. But already at Enfield, student teams are planning additional



carts that will deal with air pollution, environmental planning, mass transportation, and nutrition in great depth. Eventually, a whole fleet of Lab Carts will be on the move through the school — created and handled by students who have become deeply and personally involved in something of *their own creation.*

In the process of writing scripts for the slide-sound units, writing letters for source material, making tape interviews of specialists in the field, they are not only learning about the environment, but also mastering the traditional educational skills in new and exciting ways. While gathering their own materials and working out ways to use them, they are following almost classic educational theory: that *people learn most effectively when they become involved in individualized inquiry.*

And for the teacher becoming involved in Environmental Studies for the first time, the Lab Cart is a boon beyond price—relevant materials, all at hand, sorted by category and subject, color-slides with synchronized sound tracks that show clearly how to use the material effectively.

Steps 2 and 3:
Getting Your Students Started

You don't need a lot of people, you need a few who really care, who understand how much work an effective environmental program will take, and are willing to commit themselves to a long period of very hard work. Ask your students to get the program going, don't tell them you have it scheduled. Committees kill as many things as they foster. One student who cares, and one teacher who cares, are enough to begin. DON'T PRESS STUDENTS TO VOLUNTEER, AND DON'T BRIBE WITH OFFERS OF EXTRA CREDIT. This will be a long continuing challenge, not a "cause of the month." You need people who will stay with it because they are about the environment.

Step 4:
Getting Administrative Support

This is a most important step, and can avoid many problems later on. The key to proper handling is to understand the kind of problems a Principal has to face. When your EQ efforts start to bring outside reactions, they often end up on *his* desk, not yours. He may get a call from a newspaper asking if it's true that Miss Jones's Civics class is investigating major polluters, and he doesn't even know that Miss Jones and class have organized such a project. You have a right to expect administrative backing on a worthwhile project — but the administration has the right to know what the project is, how it will operate, and that it makes good educational sense.

Sit down with the students and think through the details of your project. How much will be done on school time, or on their own time? What will it cost the school in money and staff time? What is needed in terms of rooms, books, cameras? What problems might arise?

Help your students think through, in advance, what is likely to happen if they identify a local industry as a polluter — and that industry happens to be a major source of pay-roll for local citizens. Help them think through how they would handle a complaint, a challenging of their facts, a charge that they weren't expert enough to rate environmental quality.

After your students have thought things through, let them join you in sitting down with the Principal and other administrators. Let them make a presentation of their hopes, their fears, what they see being gained, and what they see as the costs.

The results will surprise you. You will discover that programs that make sense win support. And when problems crop up later, the administration is not only on your side, it is able to help explain the program, because it has been part of it, it has become involved, from the first day.

If yours is a larger community, make sure that the Superintendent of Schools knows what is happening, as well. AVOID DUPLICATION! Many large cities could end up with three different schools launching similar programs, all contacting the same agencies and industrial firms to ask the same questions. Try to arrange some sort of coordination through the Superintendent's office, so that you get joint, cooperative ventures instead of separate, overlapping ones.

Step 5: Train Your Team

This is not only vital to the success of the whole project, but is education in action, from the start. The problem is two-fold: a) to understand the realities of the environmental issues; b) to understand how to gather and use information.

You won't be able to do everything in advance. Much will have to be learned from practical experience gathered in the field. But it is unwise and just plain unfair to send kids out to study environmental quality without some basic training in what to do and how to do it.

This will mean some definite training sessions on how to interview people, how to make appointments, write letters, make contacts, handle matters of courtesy and protocol, etc.

Classroom practice before students venture into the field can be very helpful in developing poise and self-confidence. Your local telephone company will be very helpful in providing excellent audio-visual materials on interviewing and conversational techniques. Socio-dramas in which students act out issues they are likely to have to face are effective: let one student play the role — and experience the feelings — of a small businessman who wants to reduce pollution, but is faced with huge costs for conversion of equipment, at a time of tight money. Let another play the role of a Mayor who wants a clean, quiet village — and desperately needs industry. Let them explore the contradictions in their own feelings! The very same students who decry pollution want to drive their own cars to school instead of riding a bus! We are the ones who load our washers with phosphate-bearing detergents. We are the ones who don't want to be bothered returning bottles to the store. We are the ones who demand more and more electricity for labor-saving appliances.

As students begin exploring their own feelings with honesty, changes take place: they start to approach the issues with a little less aggression, and a little more humility. This is good. They will become more competent and efficient, rather than hasty and hysterical. When we are able to accept *our own* share of the responsibility for environmental decay, we are more able to get others to accept *their* responsibility.

Fact-gathering skills come slowly, so don't expect immediate perfection. As the program develops, continue

meeting regularly with students for evaluation and additional training in information-gathering techniques.

Basic Training In Environmental Studies. Before you get into the field, teachers and students need some basic training in the A B C's of the environment. We are *not* proposing that everyone become an expert on everything, but that everyone know the fundamental terms, how and where to get information, and understand that there are many aspects of the environment that relate to each other. John Muir said it, "When we try to pick out something by itself we find it hitched to everything else in the universe."

Avoid the two dangerous extremes: — teaching so little in advance that the kids get lost; — and teaching so much in advance that the kids get bored.

Here, for what it's worth, is our list of subjects to be covered in a "Basic Advance Training" program, to give everyone a common understanding of the basic issues.

Operation A.B.L.E. (Advance Basic Literacy about Environment). Remember, this is not the whole program. It is a condensed briefing in *fundamentals*, to get people started. The 13 units might be completed in 13 class periods. Again, this is our approach. Add or revise units to suit your own special needs.

1. A Philosophy of the Earth. Exploring how we *feel* about man's whole relationship to the earth.

2. Pollution. Air, water, noise, wastes, thermal. The causes, and the effects, now and in the future.

3. Conservation. What can be done, what has been done, what needs to be done in the future.

5. Ecology and the Chain of Life. Understanding how all forms of life connect in cycles that man constantly alters at his peril. The interaction of nature and man.

4. People and the Land. The relationship between population and land use, the realities of demographic planning, the problems posed by a finite amount of resources and infinite raising of demands.

6. Wildlife and Man. Understanding the relationship between the environment and animal populations; the effects that altering ecology will have on wildlife species in your locality, nationwide, and worldwide.

7. Law and Enforcement. Understanding what laws now exist, successes and failures in enforcing the laws, what can be done and what needs doing, on local, state, and federal levels in terms of the law.

8. Transportation and Communications. The problems of mass transit, the effects of the race to build highways. The road ahead in terms of jetports, failing railroads, the Ameri-

can need to own more and more cars, boats, motorcycles.

9. Health and Nutrition. How do we feed people, how do we protect them from the harmful effects of pollution, the problems of distribution in a world where some overeat and many die of malnutrition.

10. "A House Is Not A Home." The problems of urban and suburban living in terms of quality and cost of housing, need for related services, avoiding the creation of super-slums; a basic consideration of the ghetto and suburban sprawl.

11. The Dilemma of Priorities. The factory manager caught up in a need to install anti-pollution devices and keep costs down, the contradiction of a society that wants more cars and less carbon monoxide, less noise and supersonic jets. Are we willing to pay?

12. The Quality of Life. What sort of life do we want, in terms of recreation, parks, cultural facilities, living space? How can we preserve peace, quiet, and family living for ourselves and for the next generation?

13. "A Rendezvous With Destiny . . ." Franklin Roosevelt said it: "From some generations, much is asked. To some generations, much is given. This generation of Americans has a rendezvous with destiny." In this final unit, we attempt to consider the need for planning, for responsibility, for preserving what is best in nature, not with slogans, but with deeds.

Step 6:
Developing Individualized Study

An Environmental Studies program offers many opportunities for students to tackle individually separate facets of a complicated field. There are scores of topics in which a student might become personally interested—mercury pollution; the supersonic transport; extinction of the American Eagle; crop-dusting; the death of a river.

Part of the learning process is encouraging a student to design a plan for individual study. But that plan ought to be specific about what he is going to do, what he is going to read, and when he is going to do these things. The plan ought to be spelled out in black-and-white, and the teacher *must* follow through to help, to share in evaluation, to encourage honest self-evaluation.

But you have one great thing going for you here: Kids care about this kind of program, and the whole nature of the digging process will provide the motivation for independent study. Hooray! Kids doing homework because they really want to know something!

Step 7:
Lining Up The Job

Now your students are ready to develop a local study and compile a "Hometown Environmental Quality Index."

In Enfield, the Student EQ team is divided into five task forces. Each task force has the same mission:

a. To contact people in its category.

b. To dig deeply and thoroughly to determine how they fit into the local environmental picture, how they affect EQ in Enfield.

c. To bring that information back and translate it into graphs, figures, and scores that make sense, and can be clearly understood.

Here are the five categories that work best for us in setting up our Task Forces:

1. Local Government. Both people at the top who make decisions, and the rank and file — the people who do, and do not implement them.

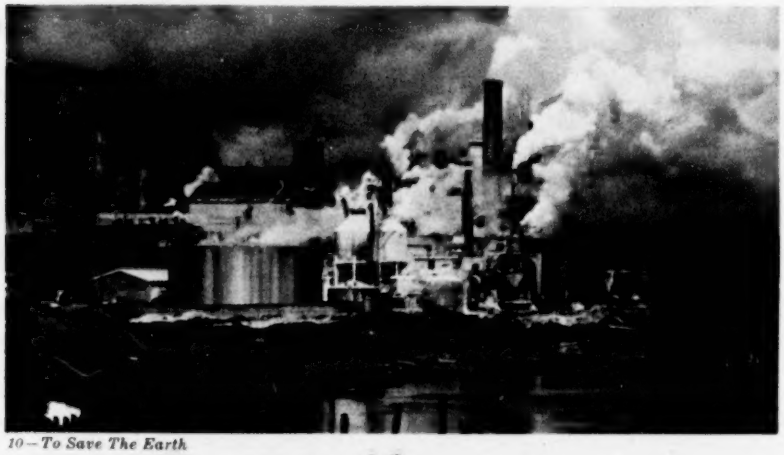
2. Private Enterprise. The factories and stores, contractors and businessmen of the community, large and small, who produce the community's goods and services and play a role, for good or evil, in shaping the environment.

3. Civic Groups. Organizations with a stake in the town's future, such as Chamber of Commerce, Rotary, Labor Unions, Truckers' Associations, Taxpayer Groups, Teachers' Associations, and the like — who play a role for good or for evil, in shaping the environment.

4. Conservation Agencies. Groups with a special stake or interest in Environmental Quality, such as The Sierra Club, National Wildlife Federation, Federal Agencies, Friends of the Earth, National Audubon Society.

5. Private Citizens. The butcher, the baker, the candlestick maker, the gym teacher and the doctor, the college professor and the chicken farmer, rich and poor, old and young, famous and obscure — all the people, who in the end, are the ultimate shapers of the environment.

Why work on so many fronts, contacting so many people? Because Environmental Quality is a vast and complex subject — like a gigantic jigsaw puzzle, and you won't be able to see the picture until you put all the pieces together.



Steps 8 and 9:
Getting the Facts

Next students need solid help in learning who to contact and why, what to measure, and how to measure it.

Here you can use the services of other faculty members. A biology teacher may be able to supply the expertise in taking water samples, a chemistry teacher may be able to teach how to measure air pollution levels, physical education teachers could help organize a study of recreation facilities. You will also find many helpful specialists in the community and in the state — the Fish and Game, Forestry, and State Parks Departments.

It is important at this stage to help students stay cool — the first time they see some real pollution they are likely to become so incensed and concerned that they want to rush into an action phase. *They aren't ready yet.* Hasty action will produce some spectacular publicity, and little tangible results. It is the slow, patient, continuing process of digging that leads to real progress. What is more, as young people develop and demonstrate a sense of calm responsibility, they will be able to attract and keep broad community support.

Steps 10 and 11:
Discussion Leads to Sharing

Now, your class can become a sort of "Clearing house" for information about the state of the local environment. Use gathered information in creative, visual ways, not merely in long, dull typewritten reports.

In Enfield, we frequently use simple color slide cameras of the "instamatic" variety and portable tape recorders, to bring home the story in the vividness of "you are there" sight and sound. Back in school, student teams write scripts, select the best slides, and music background and narration, producing complete "documentaries" that describe specific phases of the environment — the state of preservation of old landmarks, littering problems, recreational facilities.

The first stage of sharing is getting other classes to see them. *Don't run big assemblies* — it becomes mass entertainment instead of serious give-and-take discussion. *Do* set up small group showings where students and teachers can ask questions.

Students must be ready to handle questions. They will have to do a lot of studying to fill in gaps in their own knowledge and keep abreast of rapidly changing conditions in environmental lore. The object here is to attract long-term allies. You don't need sympathizers, you need partners.

Remember to include administration in the sharing process — a private advance viewing for key administrative personnel will not only impress them, but give them a chance to resolve doubts, and really understand what you're trying to do. Once the school is behind you, you can move out into the community, sharing with a wider range of people.

Here are some of the groups that are likely to welcome a visit and presentation by your kids — especially, if you have vivid pictures to show: Rotary; Board of Education; Parent-Teacher groups; League of Women Voters; veterans organizations; labor and management groups; Town Council; church groups; other schools; local colleges; and many more!

Along about now, hopefully, you publish your first complete Environmental Quality Index for the community, and give it as wide a distribution as possible. You may want to follow the format of the National Wildlife Federation's National EQ Index, and develop a system of scoring, so that each year, the citizens of the community can get a clear understanding of whether the town is gaining or losing ground. But be careful about any process of assigning numerical scores. Don't assume that local polluters are going to be delighted with bad ratings — they're going to fight back, bring in their own "experts" and argue your findings. The important thing is to set up some rules for evaluating the environment that are *fair, easy to understand, and consistent.*

Local public relations media will often be glad to publicize your findings. All of these sources should be sought out:

- Newspapers
- Radio and Television Stations
- Local bulletins, such as Rotary Newsletters
- Displays and Exhibits in local banks and shopping centers
- Magazines

TIME OUT TO POINT OUT THE OBVIOUS: ALL ALONG THE WAY, YOUR STUDENTS ARE NOT ONLY LEARNING ABOUT THE ENVIRONMENT — THEY'RE LEARNING SPEECH AND GRAMMAR, SCIENCE AND STATISTICS, GOOD PLANNING AND GOOD MANNERS — THE BASIC THINGS OF EDUCATION.

Step 12:
You Begin to DO

Now what are you going to do about the status of your local EQ? Look for goals that are within the community's reach. They should be selected by a larger group, one that can speak not just for your class, but for broad segments of the community. There is no blueprint — the crucial thing is that a plan emerge out of the hearts and minds of people who shared the whole process of digging out and discussing the facts.

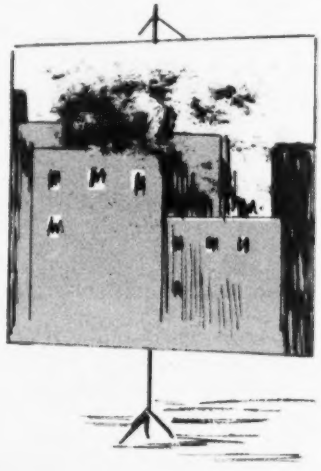
Environmental improvement can happen. A plan for mini-parks in the downtown area can be born. Long-range community planning can be started. New schools may be designed that preserve their natural surroundings. Songbirds can be attracted to abandoned nesting areas. Local refuse can be recycled and reused. Efforts can be made to pass local ordinances against smoke emission, and prohibiting local sale of non-returnable containers and high phosphate detergents. Undoubtedly you will come up with many worthwhile projects and attainable goals.

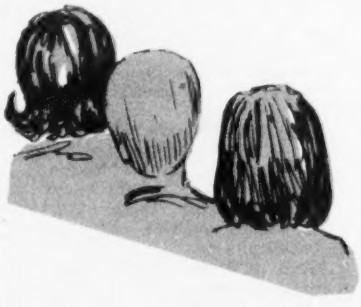
Step 13:
Sustained Action

Sometimes you will need more than mutual agreement. Sometimes you need laws put on the books. Other times you need to see that existing laws are enforced. Do whatever you can to assure permanent vigilance against pollution.

Step 14:
Repeating the Cycle

Consider doing a second EQ study, especially if you received an enthusiastic response from your first. Your second Annual EQ will start to tell the story — to tell you and your students whether you have been on a fruitless quest, or are really getting the job done. Do not get discouraged. We have spent centuries messing up our environment — it will be a long, hard job to clean it up. It can become not just an interesting program for your class, but a proud tradition for your school — the group that not only raised the warning flag, but kept the flag flying, until you could see it, not through a haze of dust and smoke and smog, but flying proud in clean skies.





The Local Community

While there will be great variations depending on the size of your community, here is a listing of some of the people who determine many policies affecting environment in a typical city. This may be useful as a check-list in planning whom to see.

1. **Town Administrators** — Mayor and City Manager, Councilmen and Selectmen.
2. **Town Planner** — He knows the potentials of the community, and has a long range view of the problems.
3. **Sanitation Department** — He can supply information about road planning, sewage conditions, and many related problems.
4. **Head of Street Department** — He can supply information about road planning, street conditions, and many related problems.
5. **Director of Parks** — The man who knows what recreational and park facilities exist, what is being planned, and what is needed — often has great insight into future of open land areas.
6. **Director of Public Works** — The man to see for data about many basic utilities.
7. **Chief of Police** — A wonderful source of information about the price we pay for slums, bad lighting, lack of recreational facilities.
8. **Town Attorney or Corporation Counsel** — A fine source for information about the laws that affect pollution and conservation.

This, of course, is just a partial listing — but it suggests how many sources of information about the environment are available. IN MANY CASES, SMALLER TOWNS WILL USE REGIONAL OR STATE OFFICIALS TO HANDLE THESE PROBLEMS — BUILD A LIST THAT SUITS YOUR OWN TOWN'S SPECIAL SITUATION.

SOURCE MATERIALS

Organizations Concerned With Environmental Issues

Bear in mind that this is a partial listing — so many groups are now involved that a complete listing is impossible. These are some of the most important ones, that are likely to be of particular help in setting up Environmental study programs.

Environmental Action — 2000 P Street, N.W., Washington, D.C. 20036
The Izaak Walton League of America — 1326 Waukegan Road, Glenview, Illinois 60025
National Audubon Society — 1130 Fifth Avenue, New York, N.Y. 10028
National Wildlife Federation — 1412 16th Street, N.W., Washington, D.C. 20036
The Sierra Club — 1050 Mills Tower, San Francisco, California 94104

Within your own state you will find many helpful agencies, such as the State Commissions and Departments dealing with Hunting and Fishing, Wildlife, Agriculture, Health, Transportation and Engineering.

Books and Magazines

You will want some basic books, many of which provide very complete lists of contacts and source material. It is not necessary to get into a big initial expenditure for expensive books — there are many very excellent paperbacks. Among the books we keep on our Environmental Studies Lab Cart are the following:

America The Raped — by Gene Marine. Simon and Schuster.
Controlling Pollution — The Economics of a Cleaner America, by Marshall Goldman. Prentice Hall.
Earth Day — The Beginning — Bantam Books.
Ecotactics. Ballantine Books.
The Environment — by the Editors of *Fortune*. Perennial Library.
The Environmental Handbook — Ballantine Books.
Moment in the Sun — by Robert and Leona Rienow. Ballentine Books.
The Population Bomb — Ballantine Books.
Superhighway-Superhoax — by Helen Leavitt. Doubleday.
Vanishing Air — by Ralph Nadar.
With Every Breath You Take — by Lewis Howard. Crown.

Many Federal Agencies, notably the Department of the Interior, can provide excellent reference materials, often at low cost, with some single copies free.

DON'T GET TRAPPED INTO SPENDING A LOT OF TIME GATHERING TONS OF MATERIAL. START WITH A FEW GOOD THINGS, AND LET YOUR OWN NEEDS DETERMINE WHERE YOU GO FROM THERE.

Try to arrange for subscriptions to good magazines in the field, and get your students into the habit of clipping relevant newspaper and magazine articles to sustain the interest in the environment that your EQ study will trigger. Our Cart has boxes of excellent reference material gathered by students and sorted by subject.

PROGRAMS

National Wildlife Federation Material

National Wildlife is a beautiful magazine that not only carries superb photographs and articles, but also features a regular "EQ Critical List" describing urgent problems in conservation that merit everyone's attention. Copies of this magazine are very basic to our work, and come close to being our "bible" for Environmental Studies. The magazine is highly suitable for junior high and secondary students.

International Wildlife, the Federation's new bi-monthly magazine, focuses upon nature, wildlife and environmental problems around the world. This too is an invaluable tool for any classroom EQ study.

Ranger Rick's Nature Magazine is written and designed especially for elementary and middle school students — but some of our high school students, especially slower readers latch on to this one as well.

Among the most useful pamphlets and bulletins available are these:

Conservation Directory — The extensive listing of government agencies and private organizations concerned with conservation is an extremely useful reference source. It is published annually by the National Wildlife Federation and lists more than 1,000 organizations including the names, addresses, titles, and telephone numbers of current top officials and officers in each.

Environmental Education — by Wilhelmina Hill. This very useful pamphlet has some sound, common-sense ideas about working environmental studies into the curriculum as well as the extra-curricular program and contains an excellent list of Sources of Materials.

The Public's Land — by Ernest Swift. An important pamphlet for developing a clear understanding of our heritage of public land and the possibilities of what might be in store.

The Case Against Hard Pesticides — by Ralph MacMullen. A readable and clearly stated pamphlet that makes a complex issue clear to the layman.

SUMMING UP

It is late at night as we write these final words. School has been dismissed hours ago, and the corridors are quiet. But we are not alone. Three of the kids on our Environmental Studies team have stayed to work on the Lab Cart, and take some pictures for a color slide unit on Enfield's historic buildings. They are young, their hair is a little long and their clothes perhaps a shade too flamboyant for my our generation to fully appreciate.

But at this hour, they look pretty great across the room, busy in the work that binds us together, not as students and teachers, but as human beings, as citizens of this great republic, as workers in a common cause.

May you find the same deep satisfactions that we have found in this common educational partnership.

We hope that this Tool Kit will be helpful to you. But the Tool Kit is not important of itself. What is important is that all over America, all over the world, people start to care about the earth, and translate that caring into deeds.

Good luck, and Godspeed, in our common work – to save the earth, and in the process, to add dignity to the family of man.

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